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3M INNOVATIVE PROPERTIES COMPANY PO BOX 33427 ST. PAUL, MN 55133-3427			EXAMINER NGUYEN, JIMMY H	
			ART UNIT 2629	PAPER NUMBER
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Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Notice of the Office communication was sent electronically on above-indicated "Notification Date" to the following e-mail address(es):

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LegalDocketing@mmm.com

Office Action Summary	Application No. 10/721,603	Applicant(s) GEAGHAN ET AL.	
	Examiner Jimmy H. Nguyen	Art Unit 2629	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --
Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 11 July 2007.
 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-35 is/are pending in the application.
 4a) Of the above claim(s) 19-35 is/are withdrawn from consideration.
 5) ☐ Claim(s) _____ is/are allowed.
 6) ☒ Claim(s) 1-18 is/are rejected.
 7) ☐ Claim(s) _____ is/are objected to.
 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
 Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
 Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
 a) ☐ All b) ☐ Some * c) ☐ None of:
 1. ☐ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. _____.
 3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|--|---|
| 1) <input type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413) |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | Paper No(s)/Mail Date. _____ |
| 3) <input checked="" type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08) | 5) <input type="checkbox"/> Notice of Informal Patent Application |
| Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____ |

DETAILED ACTION

1. This Office Action is made in response to applicant's amendment filed 07/11/2007.

Claims 19-35 are withdrawn from further consideration pursuant to 37 CFR 1.142(b) as being drawn to a nonelected Group II, there being no allowable generic or linking claim. Election was made **without** traverse in the reply filed on 01/02/2007. Claims 1-18 are considered as follows:

Claim Rejections - 35 USC § 112

2. The following is a quotation of the first paragraph of 35 U.S.C. 112:

The specification shall contain a written description of the invention, and of the manner and process of making and using it, in such full, clear, concise, and exact terms as to enable any person skilled in the art to which it pertains, or with which it is most nearly connected, to make and use the same and shall set forth the best mode contemplated by the inventor of carrying out his invention.

3. Claims 1-18 are rejected under 35 U.S.C. 112, first paragraph, as failing to comply with the enablement requirement. The claim(s) contains subject matter, which was not described in the specification in such a way as to enable one skilled in the art to which it pertains, or with which it is most nearly connected, to make and/or use the invention.

As to claims 1-18, independent claim 1 recites a feature, "the light beam having a property that abruptly changes when the tip of the stylus sufficiently contacts the input surface" in lines 3-5, which was not described in the specification in such a way as to enable one skilled in the art to understand **how the light beam itself can change its property or how the property of the light beam can change**. The disclosure, specifically Fig. 2C and the description, page 9, last paragraph, expressly teaches that a cylinder 246 is movable in and out of the stylus to change the light beam from a light beam B' to a collimated light beam B, i.e., the property of the light beam **is changed** by a mechanism. Accordingly, these claims contain the above underlined feature which was not described in the specification in such a way as to enable

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one skilled in the art to which it pertains, or with which it is most nearly connected, to make and/or use the invention.

Additionally to claim 3, this claim recites a feature, “the abrupt change is a change in beam intensity” in line 1, which was not described in the specification in such a way as to enable one skilled in the art to understand how the light beam can change the beam intensity and which element(s) of the stylus can cause a change in the beam intensity. The disclosure, specifically Fig. 2C and the description, page 9, last paragraph, expressly teaches that a cylinder 246 is movable in and out of the stylus to change the light beam from a light beam B’ to a collimated light beam B. Accordingly, this claim contains the above underlined feature which was not described in the specification in such a way as to enable one skilled in the art to which it pertains, or with which it is most nearly connected, to make and/or use the invention.

Additionally to claim 4, this claim recites a feature, “the abrupt change is a change in beam wavelength”, which was not described in the specification in such a way as to enable one skilled in the art to understand how the light beam can change the beam wavelength and which element(s) of the stylus can cause a change in the beam wavelength. The disclosure, specifically Fig. 2C and the description, page 9, last paragraph, expressly teaches that a cylinder 246 is movable in and out of the stylus to change the light beam from a light beam B’ to a collimated light beam B. Accordingly, this claim contains the above underlined feature which was not described in the specification in such a way as to enable one skilled in the art to which it pertains, or with which it is most nearly connected, to make and/or use the invention.

Additionally to claim 5, this claim recites a feature, “the abrupt change is a change in beam modulation”, which was not described in the specification in such a way as to enable one

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skilled in the art to understand how the light beam can change the beam modulation and which element(s) of the stylus can cause a change in the beam modulation. The disclosure, specifically Fig. 2C and the description, page 9, last paragraph, expressly teaches that a cylinder 246 is movable in and out of the stylus to change the light beam from a light beam B' to a collimated light beam B. Accordingly, this claim contains the above underlined feature which was not described in the specification in such a way as to enable one skilled in the art to which it pertains, or with which it is most nearly connected, to make and/or use the invention.

Additionally to claim 6, this claim recites a feature, "the abrupt change is a change in frequency modulation", which was not described in the specification in such a way as to enable one skilled in the art to understand how the light beam can change the frequency modulation and which element(s) of the stylus can cause a change in the frequency modulation. The disclosure, specifically Fig. 2C and the description, page 9, last paragraph, expressly teaches that a cylinder 246 is movable in and out of the stylus to change the light beam from a light beam B' to a collimated light beam B. Accordingly, this claim contains the above underlined feature which was not described in the specification in such a way as to enable one skilled in the art to which it pertains, or with which it is most nearly connected, to make and/or use the invention.

Additionally to claim 7, this claim recites a feature, "the abrupt change is a change in duty cycle of the modulation", which was not described in the specification in such a way as to enable one skilled in the art to understand how the light beam can change the duty cycle of the modulation and which element(s) of the stylus can cause a change in the duty cycle of the modulation. The disclosure, specifically Fig. 2C and the description, page 9, last paragraph, expressly teaches that a cylinder 246 is movable in and out of the stylus to change the light beam

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from a light beam B' to a collimated light beam B. Accordingly, this claim contains the above underlined feature which was not described in the specification in such a way as to enable one skilled in the art to which it pertains, or with which it is most nearly connected, to make and/or use the invention.

Additionally to claim 8, this claim recites a feature, "the abrupt change is a change in pulse width of the modulation", which was not described in the specification in such a way as to enable one skilled in the art to understand how the light beam can change the pulse width of the modulation and which element(s) of the stylus can cause a change in the pulse width of the modulation. The disclosure, specifically Fig. 2C and the description, page 9, last paragraph, expressly teaches that a cylinder 246 is movable in and out of the stylus to change the light beam from a light beam B' to a collimated light beam B. Accordingly, this claim contains the above underlined feature which was not described in the specification in such a way as to enable one skilled in the art to which it pertains, or with which it is most nearly connected, to make and/or use the invention.

Additionally to claim 9, this claim recites a feature, "the abrupt change is cross-sectional size of the beam", which was not described in the specification in such a way as to enable one skilled in the art to understand how the light beam can change the cross-sectional size of the beam and which element(s) of the stylus can cause a change in the cross-sectional size of the beam. The disclosure, specifically Fig. 2C and the description, page 9, last paragraph, expressly teaches that a cylinder 246 is movable in and out of the stylus to change the light beam from a light beam B' to a collimated light beam B. Accordingly, this claim contains the above underlined feature which was not described in the specification in such a way as to enable one

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skilled in the art to which it pertains, or with which it is most nearly connected, to make and/or use the invention.

Additionally to claim 10, this claim recites a feature, “the abrupt change is a change in polarization”, which was not described in the specification in such a way as to enable one skilled in the art to understand how the light beam can change the beam wavelength and which element(s) of the stylus can cause a change in the beam wavelength. The disclosure, specifically Fig. 2C and the description, page 9, last paragraph, expressly teaches that a cylinder 246 is movable in and out of the stylus to change the light beam from a light beam B' to a collimated light beam B. Accordingly, this claim contains the above underlined feature which was not described in the specification in such a way as to enable one skilled in the art to which it pertains, or with which it is most nearly connected, to make and/or use the invention.

Additionally to claim 13, this claim recites a feature, “the auxiliary switch causes the abrupt change in the light beam to simulate a condition where the tip contacts the input surface”, which was not described in the specification in such a way as to enable one skilled in the art to understand what a condition is and how the auxiliary switch causes the abrupt change in the light beam to simulate a condition where the tip contacts the input surface. The disclosure, specifically the description, page 10, lines 1-3, merely teaches that an auxiliary switch 320 for activating or changing properties of an emitted light beam **regardless of whether a tip switch is activated**, but does not explicitly describe how the auxiliary switch causes the abrupt change in the light beam, e.g., a connection of the auxiliary switch (320) and other mechanism(s) and operation(s) in order to cause the abrupt change in the light beam. Accordingly, this claim contains the above underlined feature which was not described in the specification in such a way

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as to enable one skilled in the art to which it pertains, or with which it is most nearly connected, to make and/or use the invention.

Additionally to claim 14, this claim recites a feature, “the auxiliary switch changes the beam intensity”, which was not described in the specification in such a way as to enable one skilled in the art to understand how the auxiliary switch itself can change the beam intensity. See the rejection to claim 13 above.

Additionally to claim 15, this claim recites a feature, “the auxiliary switch changes the beam modulation”, which was not described in the specification in such a way as to enable one skilled in the art to understand how the auxiliary switch itself can change the beam modulation. See the rejection to claim 13 above.

Additionally to claim 16, this claim recites a feature, “the auxiliary switch changes the beam wavelength”, which was not described in the specification in such a way as to enable one skilled in the art to understand how the auxiliary switch itself can change the beam wavelength. See the rejection to claim 13 above.

Additionally to claim 17, this claim recites a feature, “the auxiliary switch focuses the beam”, which was not described in the specification in such a way as to enable one skilled in the art to understand how the auxiliary switch itself focuses the beam. See the rejection to claim 13 above.

Additionally to claim 18, this claim recites a feature, “the auxiliary switch defocuses the beam”, which was not described in the specification in such a way as to enable one skilled in the art to understand how the auxiliary switch itself can defocuses the beam. See the rejection to claim 13 above.

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4. It is noted Applicants that due to the rejection under 35 USC 112, first paragraph above, the following art rejections are based as best understood by the Examiner.

Claim Rejections - 35 USC § 102

5. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

6. Claims 1, 2, 9, 11-13, 17 and 18 are rejected under 35 U.S.C. 102(b) as being anticipated by Oikawa et al. (US 4,320,292), hereinafter Oikawa.

As to claims 1 and 9, Oikawa discloses a stylus (a light pen 10; see Fig. 3) for use with a light sensitive user input device, the stylus comprising a light-emitting device (light emitting diode LD; see Fig. 3) configured to emit a light beam through a tip (34) of the stylus when the tip is not in contact with an input surface of the input device, and the light beam is **focussed** (this inherently implies the cross-sectional size of the beam changed) when the tip of the stylus sufficiently contacts the input surface, the abrupt change in the light beam being detectable by the light sensitive user input device (see at least col. 6, lines 45-64).

As to claim 2, Oikawa teaches the stylus (10) comprising a switch (a reed switch S1; see Fig. 3) coupled to the tip (34) and configured to actuate the change of the light beam (see col. 6, lines 54-64).

As to claim 11, Oikawa teaches the stylus comprising a reed switch (S1) coupled to the tip (34) and configured to actuate the change of the light beam (see col. 6, lines 54-64) and a source switch (S2) for controlling the power supply from a battery (B) to the circuit board (32) to

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drive the LED on and off, thereby controlling the light beam (see col. 6, line 52 through col. 7, line 4). Accordingly, either a reed switch (S1) or a source switch (S2) can correspond to the claimed auxiliary switch of claim 11.

As to claim 12, Oikawa teaches the source switch (S2) for controlling the power supply from a battery (B) to the circuit board (32) to drive the LED on and off, thereby controlling the light beam (see col. 6, line 65 through col. 7, line 4).

As to claim 13, Oikawa teaches either the switch (S1) or switch (S2) causing the light beam to simulate a condition where the tip contacts the input surface (see col. 6, line 65 through col. 7, line 4).

As to claims 17 and 18, Oikawa teaches the switch (S1) focusing when the tip of the stylus sufficiently contacts the input surface and defocusing when the tip of the stylus does not contacts the input surface (see col. 6, lines 45-64).

Claim Rejections - 35 USC § 103

7. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

8. Claims 3-8, 10 and 14-16 are rejected under 35 U.S.C. 103(a) as being unpatentable over Oikawa.

As to these claims, as discussed in the rejections under 35 USC 112, first paragraph above, because the Applicants do not describe the features of these claims so as to enable one skilled in the art to which it pertains, or with which it is most nearly connected, to make and/or

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use the invention, Examiner assumes the features of claims 3-8, 10 and 14-16 are well-known to a person of ordinary skilled in the art. Accordingly, Oikawa discloses all the claimed limitations of these claims except that Oikawa does not expressly teach that the switch (S1) can cause the change in beam intensity of claims 3 and 14, the change in beam wavelength of claims 4 and 16, the change in beam modulation of claims 5 and 15, the change in frequency modulation of claim 6, the change in duty cycle of the modulation of claim 7, or the change in pulse width of the modulation of claim 8. Official Notice is taken that both the concept and the advantages of using a switch to cause a change in beam intensity, in beam wavelength, in beam modulation, in frequency modulation, in duty cycle of the modulation, or in pulse width of the modulation are well-known and expected in the art. It would have been obvious to modify the switch of Oikawa to cause a change in beam intensity, in beam wavelength, in beam modulation, in frequency modulation, in duty cycle of the modulation, or in pulse width of the modulation, because this would provide a user additional function(s) for specific application(s), based on a change in beam intensity, in beam wavelength, in beam modulation, in frequency modulation, in duty cycle of the modulation, or in pulse width of the modulation.

Response to Arguments

9. Applicant's arguments filed 07/11/2007 have been fully considered but they are not persuasive because as follows:

a. With respect to the rejection under 35 USC 112, first paragraph, as failing to comply with the enablement requirement to claims 1-18, Applicant argues that claim 1 recites an apparatus, and not the light beam itself, effects a change in a property of the emitted light beam; see the amendment, page 5, last paragraph. Examiner disagrees because claim 1 recites "the light

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beam having a property **that** abruptly changes ... the input surface” in lines 3-5, i.e., “**a property abruptly changes**”, but not “the apparatus effects a change in a property of the emitted light beam”. Further, Applicant refers to the specification, page 5, line 21 - page 6, line 2, which discloses: “Any number of mechanisms can be used to produce the detectable, abrupt change in the light beam... or the like”; see the amendment, page 6, lines 1-16. Note that the mentioned disclosure explicitly teaches **any mechanism(s)** to be used to change the property of the light beam while claim 1 does not recite any mechanism.

With respect to the rejection under 35 USC 112, first paragraph, as failing to comply with the enablement requirement to claims 13-18, Applicant argues that the specification, page 10, lines 1-10, enables one skilled in the art to understand how the auxiliary switch 320 **may** be activated to cause a change in the light beam (see the amendment pages 8-9). Examiner disagrees because Fig. 3 merely shows an auxiliary switch without any connection with other element(s) and the mentioned disclosure does not fairly describe an operation of the auxiliary switch for causing a change in the light beam.

b. With respect to the rejection under 35 USC 102(b) to claims 1, 2, 9, 11-13, 17 and 18, as being anticipated by Oikawa et al. (US 4,320,292), Applicant argues that Oikawa fails to teach any abrupt change in the light beam recited in independent claim 1; see the amendment, pages 9-10. Examiner disagrees because Oikawa explicitly teaches that when the tip 34 of the stylus does not contact the input surface, the light beam from the LD is **scattered** (see Fig. 2; col. 3, lines 19-64) and when the tip of the stylus contacts the input surface, the tip 34 is slidably

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received in the opening 33 to cause the light beam being **focussed** (see Fig. 3; col. 6, lines 45-64).

c. With respect to the rejection under 35 USC 103(a) to claims 3-8, 10 and 14-16 as being unpatentable over Oikawa, Applicant argues based upon the limitation of independent claim 1. See the response to claim 1 above.

Further, Applicant argues that the Examiner's taking of Official Notice is predicated on the legitimacy of the Examiner's lack of enablement rejection of the claims under 35 USC 112, first paragraph; see page 12 of the amendment. As mentioned above, due to the rejection under 35 USC 112, first paragraph above, the rejections w/Official Notice are based as best understood by the Examiner.

Conclusion

10. **THIS ACTION IS MADE FINAL.** Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the mailing date of this final action.

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11. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Jimmy H. Nguyen whose telephone number is 571-272-7675.

The examiner can normally be reached on Monday - Thursday, 8:00 a.m. - 5:00 p.m..

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Bipin Shalwala can be reached at 571-272-7681. The fax phone number for the organization where this application or proceeding is assigned is (571) 273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

JHN
September 3, 2007



Jimmy H. Nguyen
Primary Examiner
Technology Division: 2629